

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A mine door leaf of generally laminar construction mounted for swinging between open and closed positions in a doorway in a mine passage, said mine door leaf comprising a central core of a solidified composition, outer panels on opposite faces of the core, the core having a force-transmitting relationship with the panels constituting the panels and core as an integral stress-resistant structure resistant to stresses to which the door leaf is subjected in a mine, including torsion-induced stresses, shear and bending stresses, and stresses induced by its own weight, and one or more hinge components on the leaf.

2. (Previously presented) The mine door leaf as set forth in claim 1 wherein the force-transmitting relationship is established by adhesion and mechanical coupling of the core to the panels.

3. (Previously presented) The mine door leaf as set forth in claim 2 wherein the core comprises a fire-resistant foam material.

4. (Previously presented) The mine door leaf as set forth in claim 3 wherein the core comprises a fire-resistant polyurethane foam material adherent to the panels thereby establishing the force-transmitting relationship.

5. (Previously presented) The mine door leaf as set forth in claim 1 comprising a frame having a top, bottom and sides, the panels being secured on the frame in opposing spaced-apart relationship enclosing a space between the panels bounded by the top, bottom and sides of the frame, the core comprising a solidified filling in said space.

6. (Previously presented) The mine door leaf as set forth in claim 5 wherein said door panels are secured to the top, bottom and sides of the frame on opposite faces of the frame.

7. (Previously presented) The mine door leaf as set forth in claim 5 wherein the force-transmitting relationship is established by adhesion and mechanical coupling of the filling to the door panels.

8. (Previously presented) The mine door leaf as set forth in claim 7 wherein the filling is a fire-resistant foam material.

9. (Previously presented) The mine door leaf as set forth in claim 8 wherein the frame has one or more filling openings through which said filling was introduced in a fluent state.

10-13. Cancelled.

14. (Previously presented) The mine door leaf as set forth in claim 5 wherein the filling is a fire-resistant material having strength in tension and compression, and wherein the frame or one or more of the door panels has one or more filling openings through which said filling was introduced in a fluent state.

15-30. Cancelled.

31. (Previously presented) The mine door leaf as set forth in claim 1 wherein said mine door leaf is mounted on a doorway frame in said mine passage, said doorway frame comprising a column yieldable to accommodate mine convergence without permanent deformation of the doorway frame.

32. (Previously presented) The mine door leaf as set forth in claim 1 wherein the force-transmitting relationship is established by adhesion of the core to the panels.

33. (Previously presented) The mine door leaf as set forth in claim 1 wherein the force-transmitting relationship is established by mechanical coupling of the core to the panels.

34. (Previously presented) The mine door leaf as set forth in claim 33 further comprising a mechanical coupling device for mechanical coupling of the core to the panels, said mechanical coupling device comprising at least one of the following: wire screen; and rebar-type elements.

35. (Previously presented) The mine door leaf as set forth in claim 5 wherein the force-transmitting relationship is established by adhesion of the filling to the door panels.

36. (Previously presented) The mine door leaf as set forth in claim 5 wherein the force-transmitting relationship is established by mechanical coupling of the filling to the door panels.

37. (Previously presented) The mine door leaf as set forth in claim 36 further comprising a mechanical coupling device for mechanical coupling of the filling to the door panels, said mechanical coupling device comprising at least one of the following: wire screen; and rebar-type elements.

38. (Previously presented) A mine door installation in a mine passageway of a mine, comprising

a doorway frame in said mine passage, said doorway frame comprising a column yieldable to accommodate mine convergence without permanent deformation of the doorway frame;

a door leaf mounted on said doorway frame for swinging between open and closed positions;

said door leaf having a generally laminar construction comprising a central core of a solidified composition, and outer panels on opposite faces of the core, the core having a force-transmitting relationship with the panels constituting the panels and core as an integral stress-resistant structure resistant to stresses to which the door leaf is subjected in said mine, including torsion-induced stresses, shear and bending stresses, and stresses induced by its own weight.

39. (Previously presented) The mine door installation of claim 38 wherein the force-transmitting relationship is established by mechanical coupling of the core to the door panels.

40. (Currently amended) The mine door ~~leaf as set forth in installation of~~ claim 39 further comprising a mechanical coupling device for mechanical coupling of the core to the door panels, said mechanical coupling device comprising at least one of the following: wire screen; and rebar-type elements.

41. (Previously presented) A mine door installation in a mine passageway of a mine, comprising:

a doorway frame in said mine passage, and
a door mounted on said doorway frame for swinging between open and closed positions,

said door including at least one door leaf, said door leaf comprising a central core of a solidified composition and outer panels on opposite faces of the core,

said door leaf having at least four edges, said frame directly supporting two of the edges when said door is in said closed position, another two of the edges being substantially free of direct support.

42. (Previously presented) The mine door installation as set forth in claim 41 wherein the supported edges include an upper edge and a first vertical edge, and the free edges are a lower edge and a second vertical edge opposite the first vertical edge.

43. (Previously presented) The mine door installation as set forth in claim 42 wherein the upper edge is supported by the doorway frame and the vertical edge is supported by at least one hinge mounted to the doorway frame.

44. (Previously presented) The mine door installation as set forth in claim 41 wherein said door includes two door leafs.

45. (Previously presented) The mine door installation as set forth in claim 41 further comprising at least one vertical column, said vertical column being adjustable to fit mine passages of different heights and yieldable to accommodate mine convergence without permanent deformation of said door frame.